

Claims

1. An optical pickup characterized by including:
 - a moving base which moves itself in the direction of radius of a disc-formed recording medium set on a disc table;
 - an objective lens driver disposed on the moving base;
 - a plurality of light-emitting elements differed in type, each of which emits, towards a plurality of disc-formed recording media differed in type, laser beam of a wavelength of approximately 405 nm, approximately 660 nm or approximately 780 nm corresponded to each of the disc-formed media;
 - an objective lens which condenses each laser beam onto a recording surface of said disc-formed recording medium; and
 - a light-receiving element which receives the laser beam emitted from said light-emitting elements, and
- 20 characterized in that:
 - 1 said objective lens condenses the laser beam onto the recording surface of the disc-formed recording medium to thereby form an elliptic beam spot;
 - 2 a long axis of a beam spot of said laser beam having a wavelength of approximately 660 nm is aligned in a direction 45° to 65° away from a tangential direction of the disc-formed recording medium; and
 - 30 a long axis of a beam spot of said laser beam having a wavelength of approximately 405 nm is aligned in a direction 25° to 45° away from the tangential direction of the disc-formed recording medium.

2. The optical pickup as claimed in Claim 1,
characterized in that a long axis of a beam spot of said
laser beam having a wavelength of approximately 780 nm is
5 aligned in a direction 45° to 65° away from the
tangential direction of the disc-formed recording medium.

3. A disc drive apparatus having a disc table on
which a plurality of disc-formed recording medium
10 differed in type is independently set and rotated,
characterized by including:

a moving base which moves itself in the direction
of radius of a disc-formed recording medium set on a disc
table;

15 an objective lens driver disposed on the moving
base;

a plurality of light-emitting elements differed in
type, each of which emits, towards a plurality of disc-
formed recording media differed in type, laser beam of a
20 wavelength of approximately 405 nm, approximately 660 nm
or approximately 780 nm corresponded to each of said
disc-formed media;

25 an objective lens which condenses each laser beam
onto a recording surface of the disc-formed recording
medium; and

a light-receiving element which receives the laser
beam emitted from said light-emitting elements, and
characterized in that:

30 said objective lens condenses the laser beam onto
the recording surface of the disc-formed recording medium
to thereby form an elliptic beam spot;

a long axis of a beam spot of said laser beam having a wavelength of approximately 660 nm is aligned in a direction 45° to 65° away from a tangential direction of the disc-formed recording medium; and

5 a long axis of a beam spot of said laser beam having a wavelength of approximately 405 nm is aligned in a direction 25° to 45° away from the tangential direction of the disc-formed recording medium.

10 4. The disc drive apparatus as claimed in Claim 3, characterized in that a long axis of a beam spot of said laser beam having a wavelength of approximately 780 nm is aligned in a direction 45° to 65° away from the tangential direction of the disc-formed recording medium.